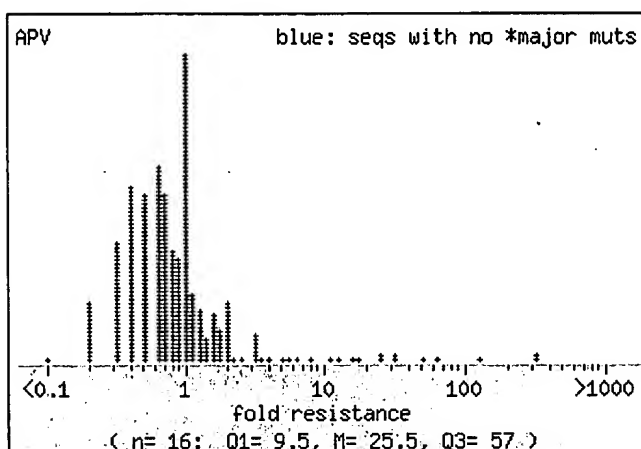


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Detailed Protease Phenotype Query

Mutations	V11I	References	8
Drugs	APV	Isolates	16
Assay	ANY	Results	16
WithNoOtherMajorMuts No			



Drug susceptibility results of sequences matching input query are shown in the table below. Literature references are indicated, as well as the isolate name and type and a list of major, minor and other mutations. The fold resistance to the indicated antiretroviral drug is indicated in the last column of the table. Data is also summarized above in graphical format. Blue bars indicate the range of resistance of those sequences with no *major drug resistance mutations (mutations at position 8,24,30,32,46,47,48,50,53,54,73,82,84,88,90) and red bars indicate the fold resistance of sequences matching the input query. The total number of sequences(n), the median fold resistance(m), as well as the first(Q1) and third quartile(Q3) are indicated.

Page 1 from Result 1 to Result 16 from Total 16 Phenotype results

Author (yr)	Type	Isolates	Major	Minor	Other	Method	Drug	Fold
Yoshimura (1999)	Clinical	Yoshi-4	M46L, V82A, L90M	L10I, L63P, A71T	V11I, T12E, I15V, L19I, R41K	Mitsuya-PBMC	APV	31.0
Colonna (2000)	Clinical	RC-V024926	L24I, I54V, G73X, I84V	L10I, M36I, L63P, A71V	V11I, A22Z, E35D, I62V, I66V	Virco	APV	>26.0
		RC-V024940	L24I, I54V, I84V	L10I, M36I, L63P, A71V	V11I, A22Z, E35D, I62V	Virco	APV	8.0
Falloon (2000)	Clinical	JF09-9w	M46L, V82A, L90M	L10I, L63P, A71T	V11IV, T12E,	Mitsuya-PBMC	APV	17.0

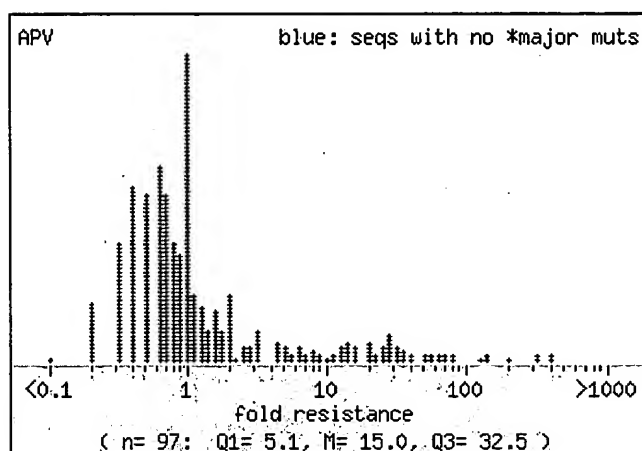
					I15V, L19I, R41K			
<u>Parkin</u> (2000)	Clinical	SD-16_4	V82F	L10I, L63T, V77I	V11I, I13V, G16E, E35D, N37S, I64V, C67Y	Virologic	APV	3.4
<u>Colonna</u> (2004)	Clinical	RC-007- 027-44421	D30N	L63P, I93L	V11I, I15V, G16A, K43R, H69K	Virologic	APV	0.5
<u>Murphy M</u> (2004)	Clinical	MDM22post	M46I, I54M, I84V, L90M	L10F, K20I, M36I, L63P, A71I, I93L	V11I, E35D, R41K, I62V, I85V	Virologic	APV	48.0
<u>Rhee</u> (2005)	Clinical	CA48195	I54L, G73S, I84V, L90M	L10I, K20I, M36IM, L63P, A71V	V11I, I15V, L19P, N37D, K43T, R57KR, I62V, P79S	Virologic	APV	11.0
<u>Rhee</u> (2006)	Clinical	CA060003	V32I, M46I, F53L, I54M, V82A, I84V, L90M	L10I, K20R, L33F, M36I, L63P, A71L, T74P	V11I, I13V, I15V, E35D, N37D, K43T, R57K, D60E, K70E, L89V	Virologic	APV	300.0
		CA63795	V32I, I54L, I84V, L90M	L10F, K20T, L33F, M36I, L63P, A71V, V77IV	V11I, I13V, I15VI, E35D, R41K, Q58E, D60E, I62V, P79H, L89V	Virologic	APV	300.0
		CA63815	I54V, G73S, V82A, L90M	L10I, K20I, M36I, L63P, A71V	V11I, K14R, I15V, L19PL, E35N, R57K, Q58E, I62V, I72LI	Virologic	APV	3.8
		CA63849	I54L, G73S, I84V, L90M	L10I, K20V, L63P, A71V, V77IV	V11I, I13A, K14IKM, L19PL, A22VA,	Virologic	APV	33.0

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Detailed Protease Phenotype Query

Mutations	L33F	References	25
Drugs	APV	Isolates	98
Assay	ANY	Results	99
WithNoOtherMajorMuts No			



Drug susceptibility results of sequences matching input query are shown in the table below. Literature references are indicated, as well as the isolate name and type and a list of major, minor and other mutations. The fold resistance to the indicated antiretroviral drug is indicated in the last column of the table. Data is also summarized above in graphical format. Blue bars indicate the range of resistance of those sequences with no *major drug resistance mutations (mutations at position 8,24,30,32,46,47,48,50,53,54,73,82,84,88,90) and red bars indicate the fold resistance of sequences matching the input query. The total number of sequences(n), the median fold resistance(m), as well as the first(Q1) and third quartile(Q3) are indicated.

Page 1 from Result 1 to Result 99 from Total 99 Phenotype results

Author (yr)	Type	Isolates	Major	Minor	Other	Method	Drug	Fold
Yoshimura (1999)	Clinical	Yoshi-7	L24I, M46L, I54V, G73S, V82A	L10I, L33F, M36I, L63P, A71V	E35D, N37S, R57K, I62V	Mitsuya-PBMC	APV	32.0
Colonna (2000)	Clinical	RC-9540.5	L90M	L10I, L33F, M36L	N37Z, I62V, I64V, N83Z	Virologic	APV	2.0
		RC-V213888	M46X, I50V	L10F, L33F, L63A, T74S, V77I	I13V, L89M	Virco	APV	14.0
		RC-V218984	I54M, G73C, L90M	L33F, L63P, V77I, I93L	T12Z, L19X, Q58E, D60E, L89M	Virco	APV	31.0

Gong (2000)	Lab	YG-RF6-3	V32I, M46I, I84V, N88S	L33F, A71V		Gong-00	APV	9.0
Brun (2001)	Clinical	SB-PtC-w48	M46I, I54V, N88G, L90M	L10I, L33F, L63P, A71I, V77I, I93L	I13V, G16A, Q18H, N37D, Q61H, I72T, L76V	Virologic	APV	2.9
Gonzales (2001)	Clinical	CA10834	D30N, N88D, L90M	L10F, L33F, M36I, L63P, I93L	T12Q, I15V, E35D, N37DN, R41K, Q58E, I62V, I64V	Virologic	APV	9.8
Kempf (2001)	Clinical	DK-2715	M46LM, I54V, G73TS, V82A, N88S, L90M	L10I, L33F, L63P, A71V, V77I	I13V, K55RK, Q58E, I62VI	Virologic	APV	2.0
		DK-7984	I54L, G73S, I84V, L90M	L10I, L33F, L63PL, A71V, V77I, I93L	I13V, L19I, H69Y	Virologic	APV	29.0
Parkin (2001)	Clinical	NP_13	D30N, M46I, I54L, N88D, L90M	L10F, K20T, L33F, M36I, L63P, A71V, V77I		Virologic	APV	28.0
		NP_14	D30N, N88D, L90M	L33F, L63P, A71T		Virologic	APV	1.3
		NP_5	D30N, I54L, N88D, L90M	L10F, L33F, L63P, A71V, V77I		Virologic	APV	11.4
Beerenwinkel (2002)	Clinical	464-LAW	L24X, D30ED, M46I, I50MI, I54F, G73T, I84V, L90M	L10I, L33FL, L63P, A71X, V77I, I93V	T12X, I15G, Q18K, L19X, A22V, D25E, A28X, L38X, P39R, K55R, I62V, I66M, I72M, P79X, N83KN, L89X	GermanNRC	APV	65.0
		6420-BOG	R8G, G48V, I54X, V82S, I84V	L10I, L33FL, L63P, A71I, V77I	I15R, N37S, D60E, I62V	GermanNRC	APV	14.0
		7056-KNU	G73S, L90M	K20I, L33FL, M36I, L63P, A71T	I15V, Q18X, L19X, L23R, K43T, Y59X, Q61X, I62V, I72V	GermanNRC	APV	3.0

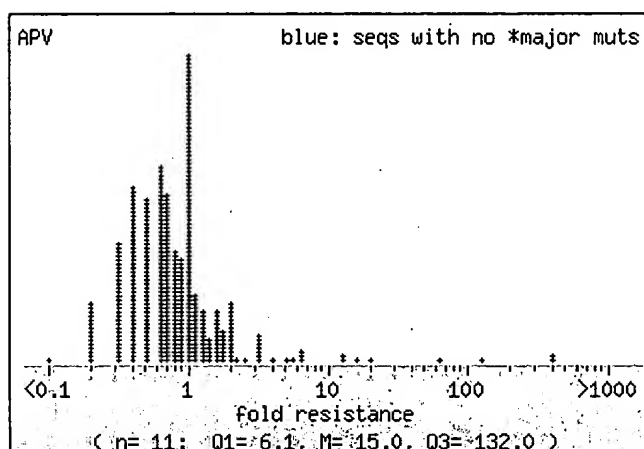
		7067-BUR	R8D, I50M, I54V, V82S, L90M	L10S, L33F, M36X, L63P, A71V, T74S, I93MI	P9L, I13V, I15G, A22X, L23X, W42X, Q58E, Q61K, I62V, P79X, L89X	GermanNRC	APV	29.0
		924-KOL	D30N, M46L, I84V, N88D, L90M	K20R, L33F, M36I, L63P	I13X, K14X, E35D, N37E	GermanNRC	APV	25.0
Maguire (2002)	Clinical	SW32514	I54L	L33F, L63P, A71V, V77I, I93L	L23VL, N37H, Y59Q*HY, D60YD, I62V	Virco	APV	7.6
	Lab	MM-L15	I54L	L33F		Virco	APV	2.4
		MM-L22	I54L	L10I, L33F		Virco	APV	4.4
		MM-L23	I50V	L33F		Virco	APV	4.4
		MM-L27	I54M	L10I, L33F		Virco	APV	6.5
		MM-L4	I54V	L33F		Virco	APV	0.8
		MM-L5		L10I, L33F		Virco	APV	0.9
		MM-L6	I54V	L10I, L33F		Virco	APV	0.9
		MM-L9		L33F		Virco	APV	1.4
Margot (2002)	Clinical	MM-2145367341	I54V, V82T, I84V, L90M	L10V, K20R, L33F, M36I, L63P, A71V	I13V, K14R, I62V, I64M, I66F	Virco	APV	2.5
		MM-2292365151	M46L, I54V, V82A, L90M	L10FV, L33FL, M36I, L63P, A71V, I93L	I15V, E35D, K43T, I62VI, I72V	Virco	APV	5.3
		MM-2867366081	M46L, I54V, V82A, L90M	L33F, V77I	I13V, L19V, N37D, I64L	Virco	APV	7.3
		MM-3355365931	I54V, V82A, L90M	L10I, K20R, L33F, M36I, L63A, A71V, I93L	E35D, N37D, R41K, D60E, I62V	Virco	APV	0.8
		MM-3978368451	M46L, I54L, V82A, L90M	L10I, L33FL, L63P, A71V	I15VI, Q58E, I62V	Virco	APV	51.6
		MM-4014366681	V32I	L33FL, M36LM, L63P, A71V	T12S, I15V, L19IL	Virco	APV	2.6
		MM-4108368501	D30N, N88D	L10F, L33F, M36L, L63Q	E35D, N37C, R41K, R57K, D60E, I62V,	Virco	APV	2.7

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Detailed Protease Phenotype Query

Mutations	E34Q	References	5
Drugs	APV	Isolates	10
Assay	ANY	Results	11
WithNoOtherMajorMuts No			



Drug susceptibility results of sequences matching input query are shown in the table below. Literature references are indicated, as well as the isolate name and type and a list of major, minor and other mutations. The fold resistance to the indicated antiretroviral drug is indicated in the last column of the table. Data is also summarized above in graphical format. Blue bars indicate the range of resistance of those sequences with no *major drug resistance mutations (mutations at position 8,24,30,32,46,47,48,50,53,54,73,82,84,88,90) and red bars indicate the fold resistance of sequences matching the input query. The total number of sequences(n), the median fold resistance(m), as well as the first(Q1) and third quartile(Q3) are indicated.

Page 1 from Result 1 to Result 11 from Total 11 Phenotype results

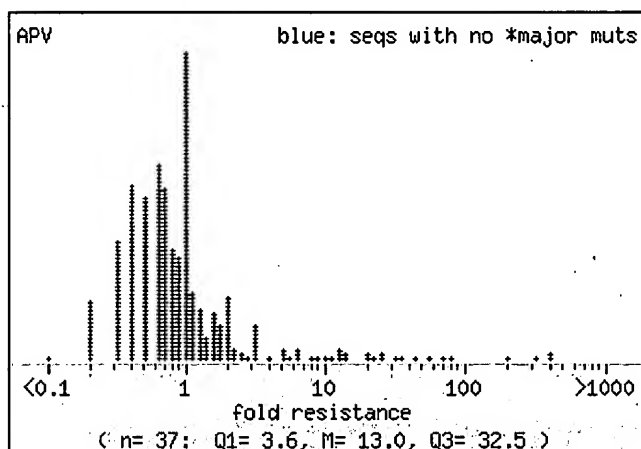
Author (yr)	Type	Isolates	Major	Minor	Other	Method	Drug	Fold
Gonzales (2001)	Clinical	CA35548	V32I, F53L, I54V, V82S, L90M	L10I, L33M, L63E, A71V	E34Q, N37H, Q61E, I64V, E65D	Virologic	APV	4.2
Kagan (2003)	Clinical	164917	V32I, I47A, L90M	L10F, K20T, L63H, A71T, V77I, I93L	T12P, K14R, I15V, G16E, E34Q, I62V	Virco	APV	13.3
Mo (2005)	Clinical	9124_d1	G48V, I54S, V82A	L10I, L63P, A71V, T74S, V77I, I93L	E34Q, I62V, I72V	Virologic	APV	6.1
		9124_d339	M46MIV, G48V,	L10I, L33LF, L63P,	E34Q,	Virologic	APV	15.0

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Detailed Protease Phenotype Query

Mutations K43T References 14
 Drugs APV Isolates 36
 Assay ANY Results 37
 WithNoOtherMajorMuts No



Drug susceptibility results of sequences matching input query are shown in the table below. Literature references are indicated, as well as the isolate name and type and a list of major, minor and other mutations. The fold resistance to the indicated antiretroviral drug is indicated in the last column of the table. Data is also summarized above in graphical format. Blue bars indicate the range of resistance of those sequences with no *major drug resistance mutations (mutations at position 8,24,30,32,46,47,48,50,53,54,73,82,84,88,90) and red bars indicate the fold resistance of sequences matching the input query. The total number of sequences(n), the median fold resistance(m), as well as the first(Q1) and third quartile(Q3) are indicated.

Page 1 from Result 1 to Result 37 from Total 37 Phenotype results

Author (yr)	Type	Isolates	Major	Minor	Other	Method	Drug	Fold
Palmer (1999)	Clinical	CA5076	M46L, I54V, V82A, I84V, L90M	L10I, M36V, L63P, A71V	E35D, K43T, D60E, I62V	Palmer-99	APV	14.0
Yoshimura (1999)	Clinical	Yoshi-5	M46L, I54V, V82A, L90M	L10I, L63P, A71V	K43T, Q92K	Mitsuya-PBMC	APV	22.0
Parkin (2000)	Clinical	SD-12_36	L24I, M46I, I54V, V82A	L10I, L63P	K43T, K55R, I64V	Virologic	APV	7.6
Shulman (2000)	Clinical	CA10011	G48V, I54V, V82A, I84V	L10I, L63P, A71V, V77I, I93L	G17E, N37D, K43T, C67S	Virologic	APV	2.3
Kempf (2001)	Clinical	DK-3025	I54V, V82A, L90M	L10V, K20R, M36I, L63P, I93L	E35D, K43T, I62V,	Virologic	APV	3.1

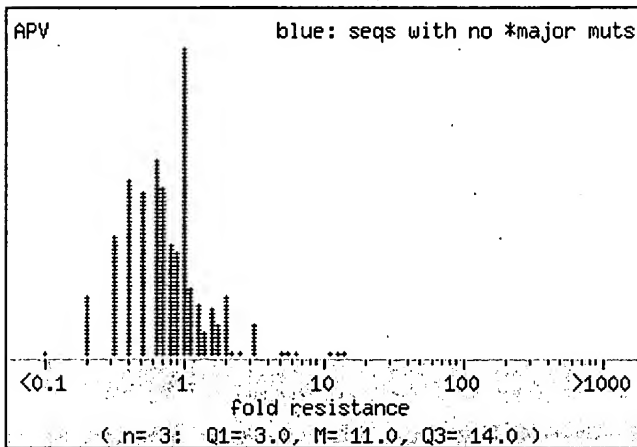
		DK-815	F53L, I54V, V82A, L90M	L10I, K20R, M36I, L63P, A71V	I64V E35D, R41KR, K43T, I62V	Virologic	APV	4.0
Beerenwinkel (2002)	Clinical	5180-WIR	L24X, V32I, M46I, I47V, V82A	L10I, L63P, A71T, I93L	K43T, I72X	GermanNRC	APV	46.0
		7056-KNU	G73S, L90M	K20I, L33FL, M36I, L63P, A71T	I15V, Q18X, L19X, L23R, K43T, Y59X, Q61X, I62V, I72V	GermanNRC	APV	3.0
Margot (2002)	Clinical	MM- 2067368051	M46L, G48V, I54V, V82T, I84V	L10I, L63P, A71V	K43T, R57K	Virco	APV	2.3
		MM- 2292365151	M46L, I54V, V82A, L90M	L10FV, L33FL, M36I, L63P, A71V, I93L	I15V, E35D, K43T, I62V, I72V	Virco	APV	5.3
		MM- 4133366691	M46I, I54V, V82A	L10F, L63P, A71T	I13V, K43T	Virco	APV	0.7
		MM- 5541368441	V32I, M46L, I47V, V82A	L10I, M36I, L63P, A71T	E35D, N37D, K43T, K55R	Virco	APV	1.8
Monno (2003)	Clinical	ML_Pat62	L90M	M36I, L63P, A71TA, I93L	K14R, E35D, K43TK, I62V	Virco	APV	1.9
		ML_Pat80	M46I, I54V, V82T, L90M	L10F, L63P, V77I, I93L	K43TK, I64V, C95F	Virco	APV	2.4
Wu (2003)	Clinical	CA13203	I54V, V82F	L10I, M36I, L63T, V77I	I13V, I15V, E35D, N37S, K43T, D60E, I62V, I64V, I72V	Virologic	APV	13.0
Mueller (2004)	Clinical	MLpat3_c	M46I, I54V, V82A, I84V	L10V, L33F, L63P	I13V, N37DN, K43T, L76V, L89M	Virologic	APV	34.0
		MLpat8_b	L24I, M46I, I54V, V82A	L10I, L63P, A71V, I93L	T12Q, L19I, K43T, Q61R, L76V	Virologic	APV	6.7
		MLpat8_c	L24I, M46I, I54V, V82A	L10I, L63P, A71V, I93L	T12Q, L19I, K43T, Q61R, I62V, L76V	Virologic	APV	21.0

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Detailed Protease Phenotype Query

Mutations	G48M	References	3
Drugs	APV	Isolates	3
Assay	ANY	Results	3
WithNoOtherMajorMuts	No		



Drug susceptibility results of sequences matching input query are shown in the table below. Literature references are indicated, as well as the isolate name and type and a list of major, minor and other mutations. The fold resistance to the indicated antiretroviral drug is indicated in the last column of the table. Data is also summarized above in graphical format. Blue bars indicate the range of resistance of those sequences with no *major drug resistance mutations (mutations at position 8,24,30,32,46,47,48,50,53,54,73,82,84,88,90) and red bars indicate the fold resistance of sequences matching the input query. The total number of sequences(n), the median fold resistance(m), as well as the first(Q1) and third quartile(Q3) are indicated.

Page 1 from Result 1 to Result 3 from Total 3 Phenotype results

Author (yr)	Type	Isolates	Major	Minor	Other	Method	Drug	Fold
Beerenwinkel (2002)	Clinical	2157-PAU	G48M, F53L, V82A, L90M	L10I, L63T, A71V, T74A, V77I, I93L	R41K, I72V	GermanNRC	APV	3.0
Sevigny (2003)	Lab	V2031	G48M, I54V, V82A, L90M	L10I, L63P, A71I, V77I		Virologic	APV	11.0
Rhee (2006)	Clinical	CA060002	G48M, I54S, V82T	L10I, K20R, L33F, L63P, T74S, V77I	I13V, E34N, E35D, N37D, K43T, Q61E, I62V, I64V	Virologic	APV	14.0

The Team

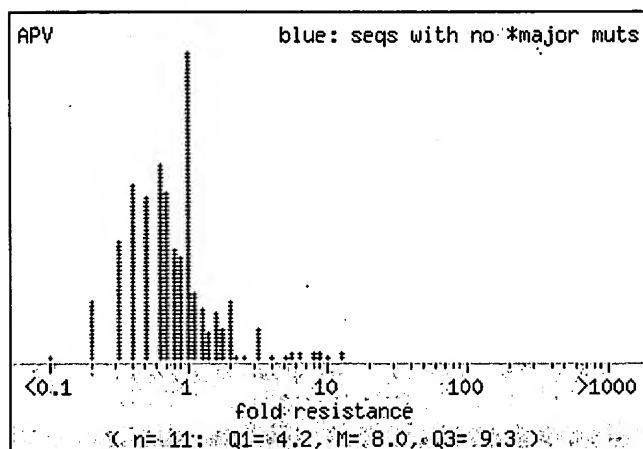
The Data

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Detailed Protease Phenotype Query

Mutations	I54A	References	6
Drugs	APV	Isolates	11
Assay	ANY	Results	11
WithNoOtherMajorMuts No			



Drug susceptibility results of sequences matching input query are shown in the table below. Literature references are indicated, as well as the isolate name and type and a list of major, minor and other mutations. The fold resistance to the indicated antiretroviral drug is indicated in the last column of the table. Data is also summarized above in graphical format. Blue bars indicate the range of resistance of those sequences with no *major drug resistance mutations (mutations at position 8,24,30,32,46,47,48,50,53,54,73,82,84,88,90) and red bars indicate the fold resistance of sequences matching the input query. The total number of sequences(n), the median fold resistance(m), as well as the first(Q1) and third quartile(Q3) are indicated.

Page 1 from Result 1 to Result 11 from Total 11 Phenotype results

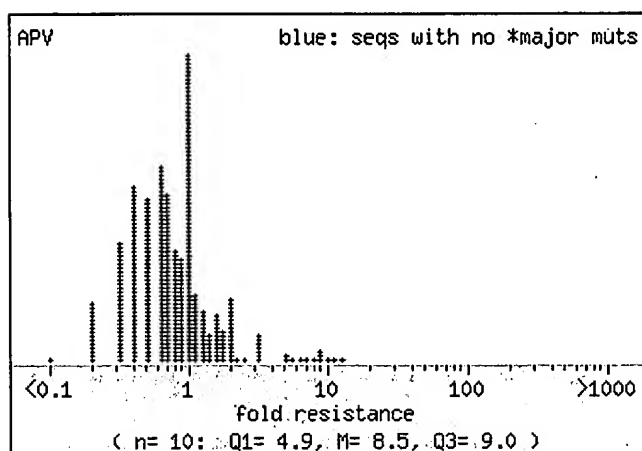
Author (yr)	Type	Isolates	Major	Minor	Other	Method	Drug	Fold
Beerenwinkel (2002)	Clinical	2547-HEG	L24X, G48V, I54A, V82A	L33X, M36X, L63P, A71I, I93M	K14Q, I15V, E21DE, A22V, L23F, T31X, N37D, K43R, R57K, Q58E, I62V, H69K	GermanNRC	APV	3.0
		292-MAT	G48V, I54A, V82A, L90M	L10I, L63P, A71V, V77I, I93L	I62V, N83KN	GermanNRC	APV	9.0
Margot (2002)	Clinical	MM-2285366851	G48V, I54A, V82A	L10I, V77I	T12P, K14R, I62V,	Virco	APV	1.4

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Detailed Protease Phenotype Query

Mutations	I54T	References	7
Drugs	APV	Isolates	10
Assay	ANY	Results	10
WithNoOtherMajorMuts No			



Drug susceptibility results of sequences matching input query are shown in the table below. Literature references are indicated, as well as the isolate name and type and a list of major, minor and other mutations. The fold resistance to the indicated antiretroviral drug is indicated in the last column of the table. Data is also summarized above in graphical format. Blue bars indicate the range of resistance of those sequences with no *major drug resistance mutations (mutations at position 8,24,30,32,46,47,48,50,53,54,73,82,84,88,90) and red bars indicate the fold resistance of sequences matching the input query. The total number of sequences(n), the median fold resistance(m), as well as the first(Q1) and third quartile(Q3) are indicated.

Page 1 from Result 1 to Result 10 from Total 10 Phenotype results

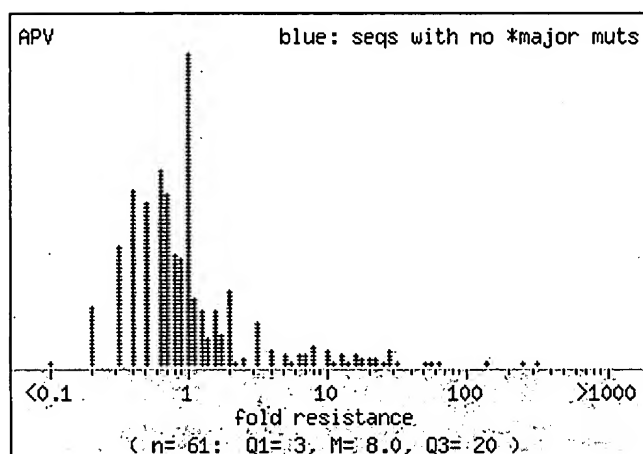
Author (yr)	Type	Isolates	Major	Minor	Other	Method	Drug	Fold
Palmer (1999)	Clinical	HMDR3-197C	G48V, I54T, V82A	L10I, L63Q, A71V, T74A, V77I, I93L	G16A, R41K, Q61H, I62V	Palmer-99	APV	9.0
Shulman (2000)	Clinical	CA10670	M46I, G48V, I54T, V82A	L10I, K20R, M36I, L63P, A71V, V77I, I93L	L23F, E35D, N37D, I62V, I72X	Virologic	APV	8.3
Kempf (2001)	Clinical	DK-8805	M46L, G48V, I54T, V82A	L10I, L63P, A71L, V77I, I93L	R41K, I72TI	Virologic	APV	6.8
Monno (2003)	Clinical	ML_Pat55	G48V, I54T, V82A	L10I, L63A, A71V	L19I, I62V, C67E, H69R,	Virco	APV	1.4

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Detailed Protease Phenotype Query

Mutations Q58E References 17
 Drugs APV Isolates 63
 Assay ANY Results 63
 WithNoOtherMajorMuts No



Drug susceptibility results of sequences matching input query are shown in the table below. Literature references are indicated, as well as the isolate name and type and a list of major, minor and other mutations. The fold resistance to the indicated antiretroviral drug is indicated in the last column of the table. Data is also summarized above in graphical format. Blue bars indicate the range of resistance of those sequences with no *major drug resistance mutations (mutations at position 8,24,30,32,46,47,48,50,53,54,73,82,84,88,90) and red bars indicate the fold resistance of sequences matching the input query. The total number of sequences(n), the median fold resistance(m), as well as the first(Q1) and third quartile(Q3) are indicated.

Page 1 from Result 1 to Result 63 from Total 63 Phenotype results

Author (yr)	Type	Isolates	Major	Minor	Other	Method	Drug	Fold
Condra (1996)	Clinical	ptKW60	M46I, I54V, V82F, L90M	L10I, L63P, V77I, I93L	Q58E, I64V	Condra-96	APV	>8.0
Colonna (2000)	Clinical	RC-1080.1	I54V, V82T, L90M	L10I, K20I, L33I, M36I, L63P, A71V	I13V, E35D, Q58E, I66V	Virologic	APV	3.0
		RC-V020853	V32I, M46L, V82A, L90M	L10I, L63P, A71V	Q58E, I62V, L89M	Virco	APV	7.0
		RC-V028427	V32I, M46I, I84V	L10I, L33M, L63P, A71V	E35D, R57K, Q58E, K70R, I72X, L89M	Virco	APV	29.0
		RC-V218984	I54M, G73C,	L33F, L63P,	T12Z,	Virco	APV	31.0

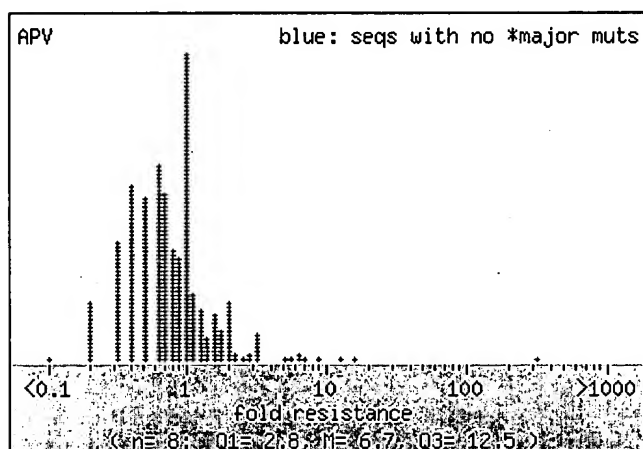
			L90M	V77I, I93L	L19X, Q58E, D60E, L89M			
<u>Parkin</u> (2000)	Clinical	SD-19_4	L24I, M46L, I54V, V82A	L10I, L63P, A71V	I15V, E35D, Q58E, Q92K	Virologic	APV	10.2
		SD-1_11	I54V, V82T	L10I, K20I, M36I, L63P, A71V	I13V, E35D, N37D, Q58E, I66F	Virologic	APV	1.2
<u>Shulman</u> (2000)	Clinical	CA4371	G73S, L90M	L10I, K20I, M36I, L63P	I15V, Q58E, I62V	Virologic	APV	3.1
<u>Gonzales</u> (2001)	Clinical	CA10834	D30N, N88D, L90M	L10F, L33F, M36I, L63P, I93L	T12Q, I15V, E35D, N37DN, R41K, Q58E, I62V, I64V	Virologic	APV	9.8
<u>Kempf</u> (2001)	Clinical	DK-1115	M46I, G73T, V82A, L90M	L10I, L63P, I93L	Q58E, Q61N, I64V	Virologic	APV	7.0
		DK-125	M46I, I54V, V82F, L90M	L10I, L63PL, V77I, I93L	Q58E, D60ED, I62VI, I64V, I72MI	Virologic	APV	17.0
		DK-2715	M46LM, I54V, G73TS, V82A, N88S, L90M	L10I, L33F, L63P, A71V, V77I	I13V, K55RK, Q58E, I62VI	Virologic	APV	2.0
		DK-7505	M46L, I54V, V82A, L90M	L10I, K20R, M36I, L63P, A71V	Q58E, I62V	Virologic	APV	6.0
<u>Beerenwinkel</u> (2002)	Clinical	1525-GEH	R8A, I54V, L90M	L10X, K20X, M36V, L63P, A71V, V77I, I93L	P9T, I13MI, A22X, L23X, D25X, E35DE, Q58E, Q61E, E65DE, I72V	GermanNRC	APV	4.0
		166-BEC	L24X, M46L, I54V, V82A, L90M	L10I, M36I, L63P, A71V, I93L	K14X, L19X, L23X, K55R, Q58E, I62V, I72V, C95F	GermanNRC	APV	19.0
		2547-HEG	L24X, G48V, I54A, V82A	L33X, M36X, L63P, A71I, I93M	K14Q, I15V, E21DE, A22V, L23F, T31X,	GermanNRC	APV	3.0

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Detailed Protease Phenotype Query

Mutations	A71L	References	5
Drugs	APV	Isolates	8
Assay	ANY	Results	8
WithNoOtherMajorMuts No			



Drug susceptibility results of sequences matching input query are shown in the table below. Literature references are indicated, as well as the isolate name and type and a list of major, minor and other mutations. The fold resistance to the indicated antiretroviral drug is indicated in the last column of the table. Data is also summarized above in graphical format. Blue bars indicate the range of resistance of those sequences with no *major drug resistance mutations (mutations at position 8,24,30,32,46,47,48,50,53,54,73,82,84,88,90) and red bars indicate the fold resistance of sequences matching the input query. The total number of sequences(n), the median fold resistance(m), as well as the first(Q1) and third quartile(Q3) are indicated.

Page 1 from Result 1 to Result 8 from Total 8 Phenotype results

Author (yr)	Type	Isolates	Major	Minor	Other	Method	Drug	Fold
Shulman (2000)	Clinical	CA10676	M46I, G73S, V82T, I84V, L90M	L10I, L63P, A71LV, V77I, I93L	N37DN, R41K, K45RK, I85V	Virologic	APV	2.3
Brun (2001)	Clinical	SB-PtC-w48	M46I, I54V, N88G, L90M	L10I, L33F, L63P, A71L, V77I, I93L	I13V, G16A, Q18H, N37D, Q61H, I72T, L76V	Virologic	APV	2.9
		SB-PtC-w71	M46I, I54V, V82A, N88G, L90M	L10I, L63P, A71L, V77I, I93L	I13V, G16A, Q18H, N37D, Q61H,	Virologic	APV	6.6

					I62V, I72T, L76V			
Kempf (2001)	Clinical	DK-8805	M46L, G48V, I54T, V82A	L10I, L63P, A71L, V77I, I93L	R41K, I72TI	Virologic	APV	6.8
Mo (2005)	Clinical	6359_d93	M46L, G48V, I54T, V82A	L10I, L63P, A71L, V77I, I93L	R41K, H69HY	Virologic	APV	8.7
		8362_d337	M46I, I54V, N88G, L90M	L10I, L33F, L63P, A71L, V77I, I93L	I13V, G16GA, Q18H, N37D, Q61H, I72T, L76V	Virco	APV	2.8
		8362_d501	M46I, I54V, V82AV, N88G, L90M	L10I, L33F, L63P, A71L, V77I, I93L	I13V, G16A, Q18H, N37D, Q61H, I62VI, I72T, L76V	Virco	APV	16.2
Rhee (2006)	Clinical	CA060003	V32I, M46I, F53L, I54M, V82A, I84V, L90M	L10I, K20R, L33F, M36I, L63P, A71L, T74P	V11I, I13V, I15V, E35D, N37D, K43T, R57K, D60E, K70E, L89V	Virologic	APV	300.0

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The Data

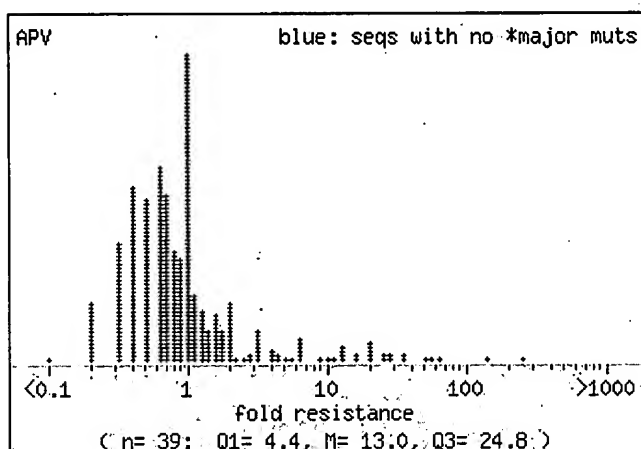
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Detailed Protease Phenotype Query

Mutations	L76V	References	12
Drugs	APV	Isolates	40
Assay	ANY	Results	40
WithNoOtherMajorMuts No			



Drug susceptibility results of sequences matching input query are shown in the table below. Literature references are indicated, as well as the isolate name and type and a list of major, minor and other mutations. The fold resistance to the indicated antiretroviral drug is indicated in the last column of the table. Data is also summarized above in graphical format. Blue bars indicate the range of resistance of those sequences with no *major drug resistance mutations (mutations at position 8,24,30,32,46,47,48,50,53,54,73,82,84,88,90) and red bars indicate the fold resistance of sequences matching the input query. The total number of sequences(n), the median fold resistance(m), as well as the first(Q1) and third quartile(Q3) are indicated.

Page 1 from Result 1 to Result 40 from Total 40 Phenotype results

Author (yr)	Type	Isolates	Major	Minor	Other	Method	Drug	Fold
Colonna (2000)	Clinical	RC-347.9	M46I, L90M	L10I, L63P, A71V, I93L	E35D, I62V, I72X, L76V	Virologic	APV	20.0
Parkin (2000)	Clinical	SD-15_1	M46I	L10V, L63P, V77I, I93L	I62V, I64V, L76V	Virologic	APV	4.4
		SD-6_5	M46I, L90M	L10I, L63P, A71V, I93L	E35D, N37D, I62V, I72E, L76V	Virologic	APV	9.1
Brun (2001)	Clinical	SB-PtC-w48	M46I, I54V, N88G, L90M	L10I, L33F, L63P, A71L, V77I, I93L	I13V, G16A, Q18H,	Virologic	APV	2.9

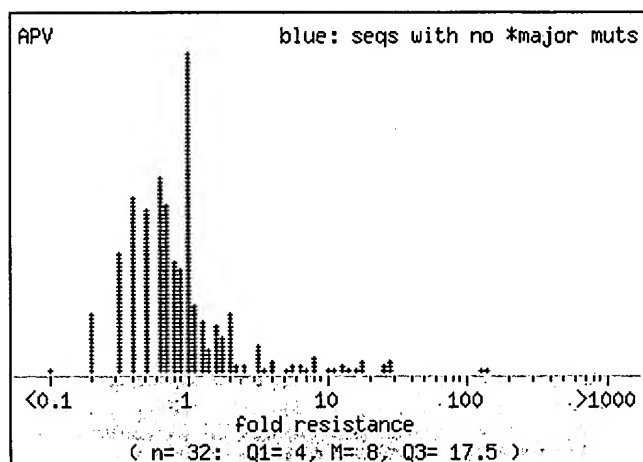
					N37D, Q61H, I72T, L76V			
		SB-PtC-w71	M46I, I54V, V82A, N88G, L90M	L10I, L63P, A71L, V77I, I93L	I13V, G16A, Q18H, N37D, Q61H, I62V, I72T, L76V	Virologic	APV	6.6
Gonzales (2001)	Clinical	CA17011	M46I, V82A	L10IV, L63P, A71V, I93L	N37D, K43R, R57K, I62V, L76V	Virologic	APV	4.3
Margot (2002)	Clinical	MM- 2235367691	D30Y, V32L	L10I, L33G, L63P, A71V, I93L	E21DE, D29E, T31L, E34R, E35D, R57K, L76V, I85VI	Virco	APV	3.9
		MM- 2372367681	M46L	L10F, L63A, A71V, V77I	I62V, K70E, L76V	Virco	APV	4.1
Gonzales (2003)	Clinical	CA17483	M46I, I54V, V82A	L10F, L63P, A71V, V77I, I93L	N37D, D60E, I62V, L76V	Virologic	APV	6.4
Mo (2003)	Clinical	MH-A6	M46I, I84V	L10I, L63P, A71V	L76V	Virologic	APV	20.9
		MH-A8	M46I, G73S, I84A	L10V, K20I, M36I, A71V	L76V	Virologic	APV	252.2
		MH-C6	M46I, I84C	L10I, L63P	G16A, L76V	Virologic	APV	64.1
		MH-V2	M46I, I84V	L10I	L76V	Virologic	APV	24.8
		MH-V6	M46I, I84V	L10V, K20I, M36I, L63P, A71V	L76V	Virologic	APV	12.5
		MH-V9	M46IM, I54V, I84V	L10I, L33F, L63P, A71T	L76V	Virologic	APV	13.2
Monno (2003)	Clinical	ML_Pat41		L10I, I93L	L19I, R41K, I62V, I64V, L76V	Virco	APV	1.0
Mueller (2004)	Clinical	MLpat1_c	V32I, M46I, F53L, I54M, G73S, L90M	L10I, M36L, L63P, A71V, V77I	I13V, K14R, L19I, E35D, N37Q, R57K, L76V, L89V	Virologic	APV	27.0
		MLpat2_a	M46I, I54V, V82A, L90M	L10I, K20R, M36I, L63P, A71V, T74KR, I93M	I15V, R41K, K55R, R57K,	Virologic	APV	21.0

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Detailed Protease Phenotype Query

Mutations	V82F	References	16
Drugs	APV	Isolates	32
Assay	ANY	Results	32
WithNoOtherMajorMuts No			



Drug susceptibility results of sequences matching input query are shown in the table below. Literature references are indicated, as well as the isolate name and type and a list of major, minor and other mutations. The fold resistance to the indicated antiretroviral drug is indicated in the last column of the table. Data is also summarized above in graphical format. Blue bars indicate the range of resistance of those sequences with no *major drug resistance mutations (mutations at position 8,24,30,32,46,47,48,50,53,54,73,82,84,88,90) and red bars indicate the fold resistance of sequences matching the input query. The total number of sequences(n), the median fold resistance(m), as well as the first(Q1) and third quartile(Q3) are indicated.

Page 1 from Result 1 to Result 32 from Total 32 Phenotype results

Author (yr)	Type	Isolates	Major	Minor	Other	Method	Drug	Fold
Condra (1996)	Clinical	ptJW24	I54V, V82F	L10I, K20R, L33I, M36I, L63P, I93L	Q18E, E35D, N37S, L89M	Condra-96	APV	1.0
		ptJW36	I54V, V82F, L90M	L10I, K20R, L33I, M36I, L63P, I93L	Q18E, E35D, N37S, L89M	Condra-96	APV	4.0
		ptKW18	L24I, M46I, V82F	I93L	N37S, I64V, E65I	Condra-96	APV	1.0
		ptKW60	M46I, I54V, V82F, L90M	L10I, L63P, V77I, I93L	Q58E, I64V	Condra-96	APV	>8.0
		ptPW12	V82F	L10I	T12S, I13V, I64V	Condra-96	APV	4.0

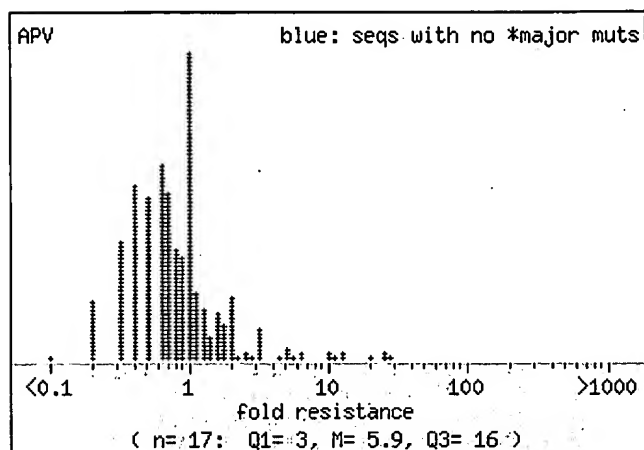
		ptPW48	M46I, V82F, I84V	L10I, L33I, M36I	T12S, I13V, I64V, L89M	Condra-96	APV	>8.0
		ptUW52	I54V, V82F, L90M	L10I, M36V, L63P, A71T, I93L	K14R, E35D, N37D, I64V	Condra-96	APV	8.0
Molla (1996)	Lab	NL43-V82F	V82F			Molla-96	APV	1.0
Gong (2000)	Lab	YG-RF1-IDV	V32I, M46I, V82F, I84V			Gong-00	APV	27.0
		YG-RF2-RTV	M46I, V82F, I84V, L90M			Gong-00	APV	28.0
Parkin (2000)	Clinical	SD-16_4	V82F	L10I, L63T, V77I	V11I, I13V, G16E, E35D, N37S, I64V, C67Y	Virologic	APV	3.4
Gonzales (2001)	Clinical	CA11218	M46I, V82F, L90M	K20I, M36I, L63P, A71V, I93L	Q61E, I62V, I72M	Virologic	APV	11.0
		CA35544	I54V, G73C, V82F, L90M	L10I, K20I, M36I, L63C, T74S	I15V, E35D, R57K, Q61N, I62VI	Virologic	APV	7.7
Kempf (2001)	Clinical	DK-125	M46I, I54V, V82F, L90M	L10I, L63PL, V77I, I93L	Q58E, D60ED, I62VI, I64V, I72MI	Virologic	APV	17.0
Beerenwinkel (2002)	Clinical	1312-EDE	R8L, I54V, V82F, L90M	L10I, K20I, L63Q, A71V, T74S, I93L	P9T, I15V, R41K, I62X, I64V, Q92K	GermanNRC	APV	7.0
		1798-RUH	I54V, V82F, I84X, N88T, L90M	L10I, K20R, M36I, L63P, A71T, I93L	I15V, L19I, E35D, I62M, I72V, I85X, R87T, Q92X, C95S, T96P, N98S	GermanNRC	APV	143.0
		2916-EDE	I54V, V82F, L90M	L10I, K20I, L63Q, A71V, T74S, V77I, I93L	I15V, E21K, D25N, R41K, I64V, G78R, I85V, Q92K	GermanNRC	APV	18.0
Margot (2002)	Clinical	MM-2424366771	M46I, I54A, V82F	L10I, L63P, A71V, V77I	E35D, N37T, I62V	Virco	APV	6.1

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Detailed Protease Phenotype Query

Mutations C95F References 10
 Drugs APV Isolates 17
 Assay ANY Results 17
 WithNoOtherMajorMuts No



Drug susceptibility results of sequences matching input query are shown in the table below. Literature references are indicated, as well as the isolate name and type and a list of major, minor and other mutations. The fold resistance to the indicated antiretroviral drug is indicated in the last column of the table. Data is also summarized above in graphical format. Blue bars indicate the range of resistance of those sequences with no *major drug resistance mutations (mutations at position 8,24,30,32,46,47,48,50,53,54,73,82,84,88,90) and red bars indicate the fold resistance of sequences matching the input query. The total number of sequences(n), the median fold resistance(m), as well as the first(Q1) and third quartile(Q3) are indicated.

Page 1 from Result 1 to Result 17 from Total 17 Phenotype results

Author (yr)	Type	Isolates	Major	Minor	Other	Method	Drug	Fold
Yoshimura (1999)	Clinical	Yoshi-3	I54V, V82T, L90M	L10I, L63P, A71V, I93L	I15V, E35D, N37E, K45R, C95F	Mitsuya-PBMC	APV	25.0
Colonna (2000)	Clinical	RC-1083.7	M46L, L90M	L63P, I93L	Q18Z, L19Z, Q92Z, C95F	Virologic	APV	5.0
Falloon (2000)	Clinical	JF08-12w	I54V, V82T, L90M	L10I, L63P, A71V, I93L	I15V, E35D, N37E, K45R, C95F	Mitsuya-PBMC	APV	13.0
Parkin (2000)	Clinical	SD-20_24	M46L, L90M	L63P, I93L	Q18H, L19I,	Virologic	APV	3.2

					Q92R, C95F			
<u>Beerenwinkel</u> (2002)	Clinical	166-BEC	L24X, M46L, I54V, V82A, L90M	L10I, M36I, L63P, A71V, I93L	K14X, L19X, L23X, K55R, Q58E, I62V, I72V, C95F	GermanNRC	APV	19.0
		1935-CR	M46I, L90M	L10I, K20X, A71X, T74S, V77I, I93L	Q18H, I64V, I72V, I85V, C95F	GermanNRC	APV	11.0
<u>Margot</u> (2002)	Clinical	MM- 2544367961	M46I, V82T, L90M	L10I, K20R, L63P, A71T, V77I, I93L	N37P, R41K, K55R, Q61E, I62V, I64L, I72T, C95F	Virco	APV	1.7
		MM- 5453366141	M46I, I54V, V82T, I84V, L90M	L10I, L63P, A71V, I93L	R41K, I62V, Q92R, C95F	Virco	APV	2.8
<u>Monno</u> (2003)	Clinical	ML_Pat80	M46I, I54V, V82T, L90M	L10F, L63P, V77I, I93L	K43TK, I64V, C95F	Virco	APV	2.4
		ML_Pat93	I54V, L90M	L10V, M36MI, L63P, A71V, V77VI, I93L	T12P, N37S, R57K, C95F	Virco	APV	2.1
		ML_Pat95	G48V, I54T, V82A, L90M	L10I, K20R, M36I, L63P, A71V, T74S, I93M	I13V, E34K, R41K, K55KR, I62V, I64M, H69R, C95F	Virco	APV	10.3
<u>Colonno</u> (2004)	Clinical	RC-009-007- 06421	L24F, M46I, F53L, G73T, I84V, L90M	L10X, L63P, V77I, I93L	I13V, K14R, I15V, G16A, L23I, E35D, N37X, I62V, I64V, I72X, C95F	Virologic	APV	4.3
<u>Mo</u> (2005)	Clinical	8359_d1091	V32I, M46I, I47A, V82VI	L10I, L63P, V77I, I93L	I62V, Q92K, C95F	Virologic	APV	29.0
		9182_d1	M46I, I54V, G73GC, V82A, L90M	L10I, M36MI, L63P, T74S, I93L	T12TK, E35D, N37D, I62V, I64IV, C95F	Virologic	APV	5.9